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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,495	11/14/2003	Woo Choi	8071-48 (OPP 030660 US)	1035
22150	7590	04/06/2006	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			DUONG, TAI V	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,495

Applicant(s)

CHOI ET AL.

Examiner

Tai Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,8-15,17-20,22 and 36-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6,8-15,17-20 and 22 is/are allowed.
- 6) ☒ Claim(s) 36-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The rejection over Lee et al is withdrawn in view of the translation of the Korean priority papers.

Claim 10 is allowable. The restriction requirement between inventions or species, as set forth in the Office action mailed on 06/30/2005, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claim 21, which required all the limitations of an allowable claim, previously withdrawn from consideration as a result of the restriction requirement, was canceled by applicant in the reply filed on 01/17/2006. The canceled, nonelected claim(s) may be reinstated by applicant if submitted in a timely filed amendment in reply to this action. Upon entry of the amendment, such amended claim(s) will be examined for patentability under 37 CFR 1.104.

In view of the withdrawal of the restriction requirement as set forth above, applicant(s) are advised that if any claim(s) depending from or including all the limitations of an allowable claim is presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recited feature "at

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least one spacer *formed over the thin film transistor*" of claim 36, and the recited feature "at least one spacer ... and *overlapping the thin film transistor*" of claim 42 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification does not disclose the features "*at least one spacer formed over the thin film transistor*" and "*at least one spacer ... and overlapping the thin film transistor*", as recited in claims 36 and 42.

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 36-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original specification does not disclose the features "at least one spacer *formed over the thin film transistor*" and "at least one spacer ... and *overlapping the thin film transistor*", as now recited in claims 36 and 42. Claims 37-41 and 43-51 are also rejected since they depend on the rejected claims 36 and 42.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36-38, 42-45 and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-082339 (JP'339) of record in view of Yanagawa et al (US 2003/0020864).

As to claims 36, 42, 43, 49 and 50, the only difference between the LCD of the JP'339 and that of the instant is the spacer formed over the thin film transistor or overlapping the thin film transistor. See discussions of the JP'339 in the last Office

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Action. Yanagawa et al disclose in Fig. 7 that it was known to have the spacer 10 formed over the thin film transistor TFT or overlapping the thin film transistor (paragraphs 0112-0118). Thus, it would have been obvious to a person of ordinary skill in the art to employ the spacer formed over the thin film transistor or overlapping the thin film transistor in the LCD of the JP'339 for preventing galvanic corrosion, as disclosed by Yanagawa et al (paragraphs 0116-0118). As to claims 37, 38, 44, 45 and 48, the passivation layer PAS and the black matrix BM are well-known in the art as evidenced by Yanagawa et al (paragraphs 0066 and 0068). Thus, it would have been obvious to a person of ordinary skill in the art to employ the passivation layer and the black matrix in the LCD cited in the above rejection of claims 36 and 42 for protecting the thin film transistors to direct contact with the liquid crystal layer and for preventing light leakage at the no-pixel portions.

Claims 1-6, 8-15, 17-20 and 22 are allowed. Claims 1 and 10 are allowed over the prior art of record because none of the prior art discloses or suggests a LCD having the combination of the features "at least one spacer formed over the substrate, the at least one spacer having a tapered shape with an inclination angle in the range of about 20-about 70 degrees and a height in the range of about 2.5-about 5.0 microns" and "a compression deformation equal to or larger than about 0.40 microns in response to about 5 gf". Claims 2-5, 8, 9, 11-14, 17-20 and 22 are also allowed since they depend on the allowed claims 1 and 10.

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Claims 39-41, 46, 47 and 51 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 39-41 are allowed over the prior art of record because none of the prior art discloses or suggests a panel having the structure as recited in claim 36 or 38 *in combination* with the feature "wherein the at least one spacer has a contact area with the passivation layer in the range of about 600 to about 1,000 square microns", "wherein the at least one spacer has a compression deformation equal to or larger than about 0.40 microns in response to about 5 gf" or "wherein the at least one spacer comprises a plurality of spacers, and the concentration of the plurality of spacers throughout the panel is about 250 to about 450/cm²".

Claims 46, 47 and 51 are allowed over the prior art of record because none of the prior art discloses or suggests a LCD having the structure as recited in claim 42 or 49 *in combination* with the feature "wherein the at least one spacer has a contact area with the passivation layer in the range of about 600 to about 1,000 square microns", "wherein the at least one spacer has a compression deformation equal to or larger than about 0.40 microns in response to about 5 gf" or "wherein the at least one spacer comprises a plurality of spacers, and the concentration of the plurality of spacers throughout the panel is about 250 to about 450/cm²".

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Tai Duong at telephone number (571) 272-2291.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


TVD

04/06


TOANTON
PRIMARY EXAMINER